

2.0 BACKGROUND

Historically, mineral resources extracted on the Hanford Site have been used (1) as aggregate for concrete and roads, (2) as cap material for interim stabilization, (3) as backfill for closing waste sites, and (4) as general construction aggregate. Associated land-use commitments in general, and borrow sites specifically, have been and continue to be addressed when considering activities on the Hanford Site. Land use on the Hanford Site has been addressed in the *Final Hanford Comprehensive Land-Use Plan Environmental Impact Statement* (herein referred to as the HCP EIS) (DOE 1999). Appendix D of the HCP EIS identifies preferred sources of borrow material on the Hanford Site. The preferred sources of borrow material are also documented in the *Draft Industrial Mineral Resources Management Plan* (DOE-RL 2000a). The *Draft Industrial Mineral Resources Management Plan* was intended to provide a framework for the planning, operations, and closure/restoration of borrow pits and quarries and was developed as part of a series of resource management plans needed to implement the HCP EIS.

Several borrow areas were evaluated for continued use in the *Environmental Assessment for Use of Existing Borrow Areas, Hanford Site, Richland, Washington* (DOE 2001). The *Environmental Assessment for Use of Existing Borrow Areas, Hanford Site, Richland, Washington* was performed as fulfillment of a DOE commitment in the HCP EIS to perform a specific *National Environmental Policy Act of 1969* (NEPA) analysis addressing gravel quarries and borrow sites (DOE 1999). Some of the borrow sources identified in DOE-RL (2000a) and DOE (2001) that are intended to support remedial action backfill requirements in the 100-F, 100-H, 100-N, and 100-K Areas present certain challenges, such as limited fill material availability or limited expansion capability, locations that are substantial distances from the remedial action sites, locations that are near sensitive species, or fiscal considerations that cause them to be less preferable sources of fill material. For these reasons, the reopening of former borrow sites located in the 100-F, 100-H, and 100-N Areas is being evaluated as a Proposed Action to meet backfill requirements. These borrow sites were formerly used for fill material during construction and operation phases at the Hanford Site, but have since been abandoned. The former borrow sites were not restored to native habitat and can easily be reopened with few or no impacts to natural resources. The framework for the planning, operation, closure, and restoration of borrow pits and quarries, including procedures for reexcavation of former borrow sites and opening of new borrow sites, is addressed in the *Draft Industrial Mineral Resources Management Plan* (DOE-RL 2000a), and also in the *Mitigation Action Plan for the 100 and 600 Areas of the Hanford Site* (DOE-RL 2001d). The closure of alternate borrow sites (described in Section 3.2) that are not selected for use under the Proposed Action is not within the scope of this environmental assessment (EA).

Environmental restoration projects in the 100-F, 100-H, 100-K, and 100-N Areas of the Hanford Site will require approximately 1,104,000 bcm of fill material over a period of approximately 10 years (until 2012) both to backfill remedial action waste sites and to fill voids at the Interim Safe Storage (ISS) reactor sites. The projected needs for raw aggregate material over the remedial action period are listed in Table 2-1.

Table 2-1. Projected Borrow Needs for Remediation Projects in the 100-F, 100-H, 100-K, and 100-N Areas.

Activity	Required Volume (bcm)
100-F Area	
Remedial action	250,000
ISS (F Reactor)	10,700
Total =	260,700
100-H Area	
Remedial action	100,000
ISS (H Reactor)	10,700
Total =	110,700
100-K Area	
Remedial action	300,000
K East ISS (KE Reactor)	32,100
K West ISS (KW Reactor)	32,100
Total =	364,200
100-N Area	
Remedial action	347,000
ISS (N Reactor)	21,400
Total =	368,400
Grand Total =	1,104,000

To meet the backfill quantity requirements, three borrow sources located adjacent to the remediation areas have been identified and are being considered for use under the Proposed Action. The sites addressed in the Proposed Action ensure availability of material to satisfy backfill requirements, minimize haul distances from borrow sources to remedial action sites, reduce impacts to natural and cultural resources, and reduce costs associated with the excavation and transportation of materials by approximately \$1.9 million. The Proposed Action is compared to Alternative Actions using existing borrow sites identified in the *Draft Industrial Mineral Resources Management Plan* (DOE-RL 2000a) and *Environmental Assessment for Use of Existing Borrow Areas, Hanford Site, Richland, Washington* (DOE 2001). Potential impacts from the Proposed Action as well as the Alternative Actions are identified and compared.